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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/731,225

12/06/2000

Weidong Mao

1181

1852

7590

07/23/2004

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EXAMINER

USTARIS, JOSEPH G

ART UNIT

PAPER NUMBER

2616

5

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,225

Applicant(s)

MAO ET AL.

Examiner

Joseph G Ustaris

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 19-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because Fig. 7, disclosed in the specification, is missing. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 19-21 are objected to because of the following informalities: "1n-band" should be In-band on line 3 of each claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7, 8, 13, 14, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US006378130B1) in view of Gotwald (US005987518A) and Tsutsui et al. (US 20020046408A1).

Regarding claim 1, Adams discloses a full service network or "digital video television communication system" that includes a "headend" (See Fig. 1, element 2) "coupled to a two-way communication medium" (See Fig. 1, elements 3-5) "and at least one digital video set-top box coupled to said two-way communications medium" (See Fig. 1, element 6). The headend transmits on a "plurality of communication channels including in-band video channels" (See column 1 lines 60-65, column 2 lines 10-25, column 5 lines 1-20). The system also allows the users to send a request for a media asset from the set-top terminal or "digital video set-top box" to the headend or "sending a channel resource request" (See Fig. 7), the headend then fulfills the request by finding the media asset and selecting a frequency associated with the server or "selecting a selected communication channel" to transmit the data to the set-top terminal (See Fig. 7; column 10 lines 20-35). The headend also sends a reply message via IP datagrams or "sending a channel resource confirmation message" that tells the set-top terminal which frequency the data will be sent down or "identifying selected communication

channel to set-top box" (See Fig. 7; column 10 lines 60-65). The set-top terminal proceeds to tune to that selected channel frequency or "selecting selected communication channel" (See Fig. 7; column 11 lines 8-20). However, Adams does not disclose that each of the FDM channels or "in-band video channels" includes "a plurality of multiplexed digital video channels and a plurality of data packets...for carrying IP over MPEG data packets" and for the request for a media asset to represent "a video channel change at the set-top terminal".

Gotwald discloses a method for communicating Internet Protocol (IP) data over a broadband MPEG channel. The system includes a multiplexing driver that multiplexes various MPEG2 streams, from various sources, onto each channel or "plurality of multiplexed digital video channels" (See Fig. 2; column 3 lines 40-56). The multiplexing driver also multiplexes IP data or IP datagrams, which has been encapsulated into a MPEG2 transport packets, onto each channel or "plurality of data packets...for carrying IP over MPEG data packets" where inherently MPEG2 data packets are identified by "packet ID (PID)" (See Fig. 2; column 4 lines 25-40). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the full service network, IP data, and FDM channels disclosed by Adams to carry "a plurality of multiplexed digital video channels and a plurality of data packets...for carrying IP over MPEG data packets", as taught by Gotwald, in order to provide a low cost and efficient means of communicating IP data to the set-top terminal or "set-top box".

Tsutsui et al. (Tsutsui) discloses a CATV system where the subscribers station or set-top terminal are able to send an operational request to the CATV central station or headend, wherein the operational request can represent changing the video channel (See Fig. 1 and paragraph 0088 and 0089). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and request for media asset disclosed by Adams to represent "a video channel change", as taught by Tsutsui, in order to provide a means to monitor the activity of the set-top terminal.

Regarding claim 2, the "selected communication channel" is identified within a reply message or "channel resource confirmation message" that is within a MPEG packet as taught by Gotwald, where inherently a packet ID (PID) would describe the contents of the MPEG packet (See claim 1 above).

Claim 7 contains the limitations of claim 1 (wherein the full service network includes a headend) and is analyzed as previously discussed with respect to that claim.

Claim 8 contains the limitations of claims 2 and 7 and is analyzed as previously discussed with respect to those claims.

Claim 13 contains the limitations of claim 1 (wherein the full service network includes a set-top terminal) and is analyzed as previously discussed with respect to that claim.

Claim 14 contains the limitations of claims 2 and 13 and is analyzed as previously discussed with respect to those claims.

Claim 19 contains the limitations of claim 1 (where inherently the headend and set-top terminal each have a "transmitter" and "receiver") and is analyzed as previously discussed with respect to that claim.

Claim 20 contains the limitations of claims 1 and 19 and is analyzed as previously discussed with respect to those claims.

Claim 21 contains the limitations of claims 1 and 19 and is analyzed as previously discussed with respect to those claims.

Claims 3, 9, 15, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US006378130B1) in view of Gotwald (US005987518A) and Tsutsui et al. (US 20020046408A1) as applied to claims 1, 2, 7, 8, 13, 14, and 19-21 above, and further in view of Banker et al. (US005497187A).

Regarding claim 3, Adams in view of Gotwald and Tsutsui also discloses the use of out-of-band (OOB) tuners, where inherently the system full service network includes "an out-of-band region having at least one out-of-band communication channel" (See Adams Fig. 3, elements 42 and 43; column 5 lines 15-17). However, Adams in view of Gotwald and Tsutsui does not disclose the use of the OOB channel as a "selected communication channel".

Banker et al. (Banker) discloses an In-band/out-of-band data transmission method for a television system. The system utilizes both the in-band and out-of-band to transport data to the terminals or set-top terminals or "selected communication channel...is and OOB channel". Inherently, when an OOB transmission method is used

it is "identified in the channel resource confirmation message" as discussed in claim 1 above. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the full service network and reply message disclosed by Adams in view of Gotwald and Tsutsui to utilize the OOB channel as the "selected communication channel" and identify it within the replay message, as taught by Banker, in order to ensure that the data is delivered to the terminals by efficiently using all available resources.

Claim 9 contains the limitations of claims 3 and 7 and is analyzed as previously discussed with respect to those claims.

Claim 15 contains the limitations of claims 3 and 13 and is analyzed as previously discussed with respect to those claims.

Claims 22 and 23 contains the limitations of claims 2, 3, and 21 and is analyzed as previously discussed with respect to those claims.

Claims 4-6, 10-12, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US006378130B1) in view of Gotwald (US005987518A) and Tsutsui et al. (US 20020046408A1) and Banker et al. (US005497187A).

Claim 4 contains the limitations of claims 1 and 3 (wherein a "plurality of channels" inherently include a least two channels or "first and second in-band video channels" where each channel carries a "first/second plurality of multiplexed digital video channels and a plurality of data packets, each of the data packets being identified by a PID for carrying IP over MPEG data packets") and is analyzed as previously

discussed with respect to those claims. However, Adams in view of Gotwald and Tsutsui does not disclose a channel resource request representing a "channel change from a multiplexed digital video channel in a first video channel to a multiplexed digital video channel in a second video channel" and "determining whether the second video channel has an available communication channel" and "selecting the second video channel if second video channel has an available communications channel...and selecting a OOB channel...if second communication channel does not have an available communication channel".

Adams in view of Gotwald and Tsutsui discloses that the set-top terminal sends a request for changing video channels as discussed in claim 1 above. Official Notice is taken that it is well known that a channel change request from the set-top terminal would change from one video channel to another video channel, where each channel carries multiplexed MPEG2 streams as discussed in claim 1 above. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and request for media asset disclosed by Adams in view of Gotwald and Tsutsui to represent a "channel change from a multiplexed digital video channel in a first video channel to a multiplexed digital video channel in a second video channel", in order to provide more control to the user to what programs the user wishes to view.

Banker et al. (Banker) discloses an In-band/out-of-band data transmission method for a television system. The system utilizes both the in-band and out-of-band (OOB) to transport data to the terminals or set-top terminals. The system first

determines if the load of the out-going in-band channels is great or not or "determining whether a second video channel has an available communication channel". Inherently, the system selects an in-band channel if the load isn't great or "selecting the second video channel if second video channel has an available communications channel", otherwise the system selects an OOB channel to transmit the data to the terminal or "selecting a OOB channel...if second communication channel does not have an available communication channel" (See column 8 lines 3-20). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the full service network and headend disclosed by Adams in view of Gotwald and Tsutsui to "determine whether the second video channel has an available communication channel" and "selecting the second video channel if second video channel has an available communications channel...and selecting a OOB channel...if second communication channel does not have an available communication channel", as taught by Banker, in order to provide a more expedient mode of transmission.

Claim 5 contains the limitations of claims 2 and 4 and is analyzed as previously discussed with respect to those claims.

Claim 6 contains the limitations of claims 3 and 4 and is analyzed as previously discussed with respect to those claims.

Claim 10 contains the limitations of claim 4 (wherein the full service network includes a headend) and is analyzed as previously discussed with respect to that claim.

Claim 11 contains the limitations of claims 5 and 10 and is analyzed as previously discussed with respect to those claims.

Claim 12 contains the limitations of claims 6 and 10 and is analyzed as previously discussed with respect to those claims.

Claim 16 contains the limitations of claim 4 (wherein the full service network includes a set-top terminal) and is analyzed as previously discussed with respect to that claim.

Claim 17 contains the limitations of claims 5 and 16 and is analyzed as previously discussed with respect to those claims.

Claim 18 contains the limitations of claims 6 and 16 and is analyzed as previously discussed with respect to those claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please take note of Mao (US006728965B1) for the similar method of changing channels in a digital video system.

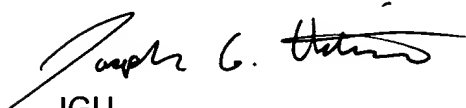
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Ustaris whose telephone number is (703) 305-0377. The examiner can normally be reached on Monday-Friday with alternate Fridays off from 7:30 A.M. to 5:00 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile, can be reached on (703) 305-4380. The fax phone number for this Group is (703) 872-9306.

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Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703) 305-4700.


JGU
June 29, 2004


VIVEK SRIVASTAVA
PRIMARY EXAMINER